



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Atsushi HAYAMI

Serial No. 09/989,395

Art Unit:

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Examiner:

For: MODULATION SYSTEM

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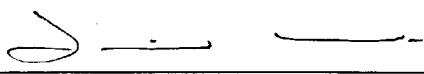
**SUBMISSION OF FORMAL DRAWINGS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith are eleven (11) sheets of formal drawings containing Figs. 1-15 relating to the above-identified application.

Respectfully submitted,

  
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Date: Oct 26 2004



04-0121-1  
0102/0189

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## FIG. 1

DECIMAL	BINARY
0	000000
1	000001
2	000010
4	000100
5	000101
8	001000
9	001001
10	001010
16	010000
17	010001
18	010010
20	010100
21	010101
32	100000
33	100001
34	100010
36	100100
37	100101
40	101000
41	101001
42	101010



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*FIG. 2*

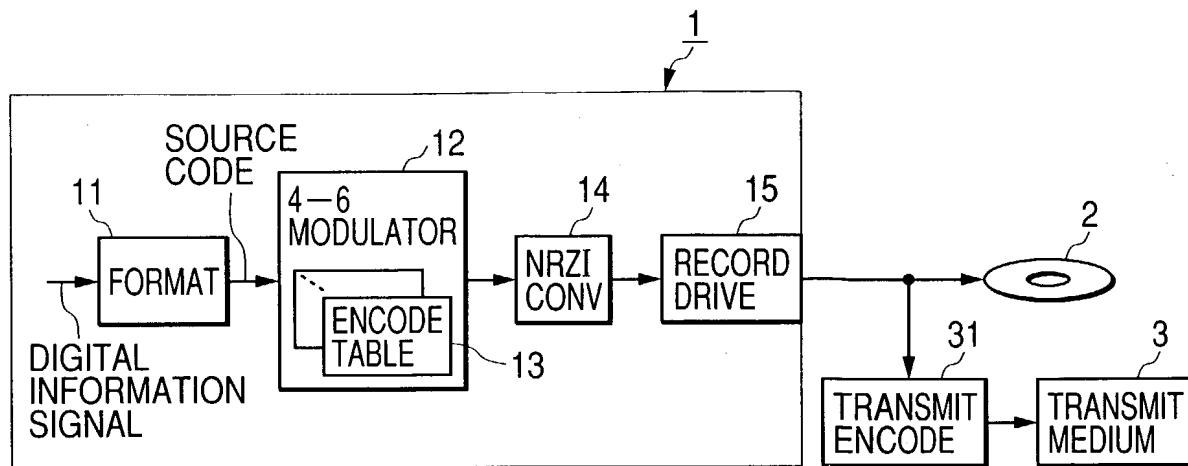
S(k)	D(k)	C(k)	S(k+1)	C(k)	S(k+1)	C(k)	S(k+1)	C(k)	S(k+1)			
0	1	000001	0	9	001001	0	33	100001	0	41	101001	0
1	1	000001	1	9	001001	1	33	100001	1	41	101001	1
2	17	010001	0	5	000101	0	17	010001	0	37	100101	0
3	17	010001	1	5	000101	1	17	010001	1	37	100101	1
4	18	010010	1	2	000010	1	18	010010	1	34	100010	1
5	18	010010	2	2	000010	2	18	010010	2	34	100010	2
6	18	010010	3	2	000010	3	18	010010	3	34	100010	3
7	21	010101	0	4	000100	1	36	100100	1	21	010101	0
8	21	010101	1	4	000100	2	36	100100	2	21	010101	1
9	20	010100	1	4	000100	3	36	100100	3	20	010100	1
10	20	010100	2	10	001010	1	42	101010	1	20	010100	2
11	20	010100	3	8	001000	1	40	101000	1	20	010100	3
12	0	000000	2	10	001010	2	42	101010	2	32	100000	2
13	0	000000	3	10	001010	3	42	101010	3	32	100000	3
14	16	010000	2	8	001000	2	40	101000	2	16	010000	2
15	16	010000	3	8	001000	3	40	101000	3	16	010000	3



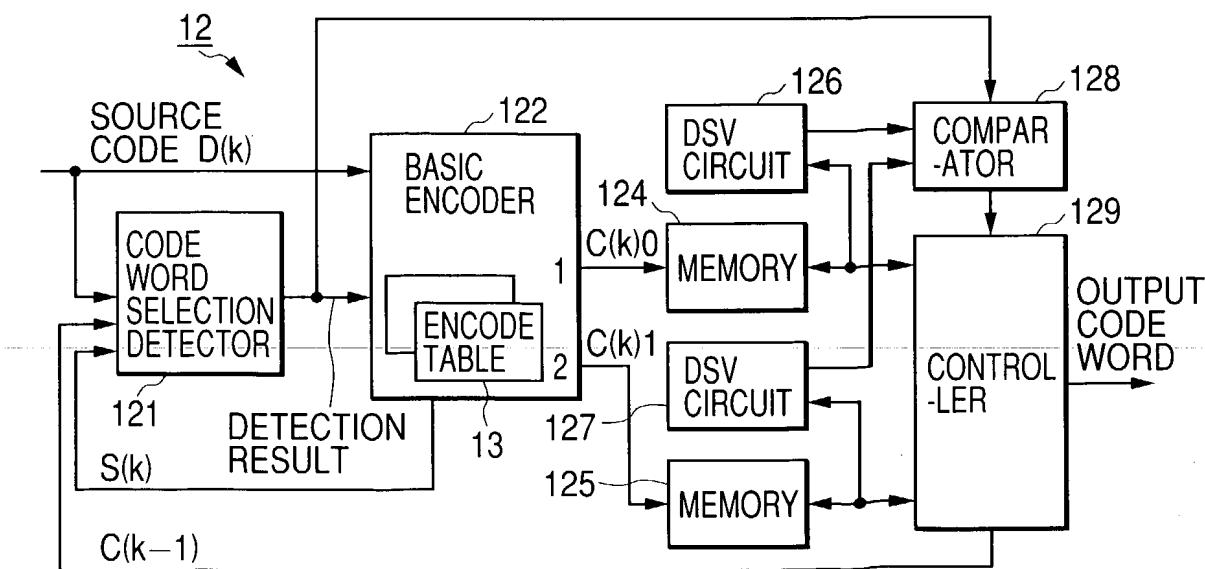
FIG. 3

S(k)	D(k)	C(k)	S(k+1)	C(k)	S(k+1)	C(k)	S(k+1)	C(k)	S(k+1)			
0	1	000001	0	9	001001	0	33	100001	0	41	101001	0
1	17	010001	1	5	000101	1	17	010001	1	37	100101	1
2	18	010010	2	2	000010	2	18	010010	2	34	100010	2
3	17	010001	0	5	000101	0	17	010001	0	37	100101	0
4	18	010010	1	2	000010	1	18	010010	1	34	100010	1
5	1	000001	1	9	001001	1	33	100001	1	41	101001	1
6	18	010010	3	2	000010	3	18	010010	3	34	100010	3
7	20	010100	1	4	000100	1	36	100100	1	20	010100	1
8	21	010101	0	4	000100	2	36	100100	2	21	010101	0
9	20	010100	2	4	000100	3	36	100100	3	20	010100	2
10	21	010101	1	10	001010	1	42	101010	1	21	010101	1
11	20	010100	3	8	001000	1	40	101000	1	20	010100	3
12	16	010000	2	8	001000	2	40	101000	2	16	010000	2
13	0	000000	3	10	001010	3	42	101010	3	32	100000	3
14	16	010000	3	8	001000	3	40	101000	3	16	010000	3
15	0	000000	2	10	001010	2	42	101010	2	32	100000	2

*FIG. 4*



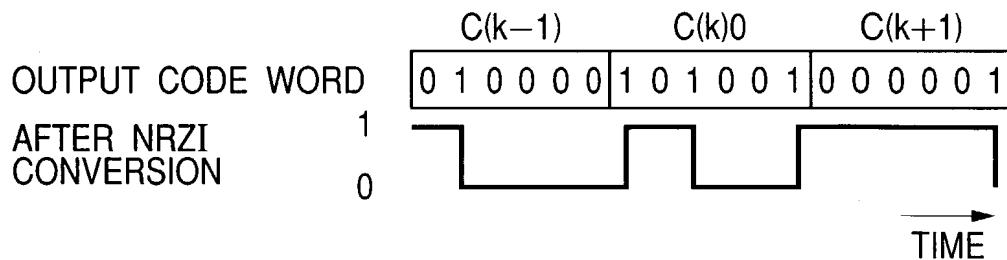
*FIG. 5*



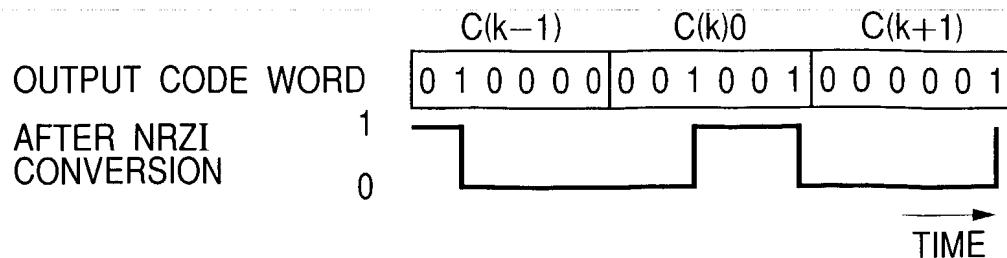
*FIG. 6*

INPUT CODE WORD $D(k)$	CURRENT-TABLE SELECTION NUMBER $S(k)$	OUTPUT CODE WORD $C(k)$	NEXT-TABLE SELECTION NUMBER $S(k+1)$
4	0	18	1
5	1	2	2
6	2	18	3
7	3	21	0
8	0	21	1

*FIG. 8*



*FIG. 9*



**FIG. 7**

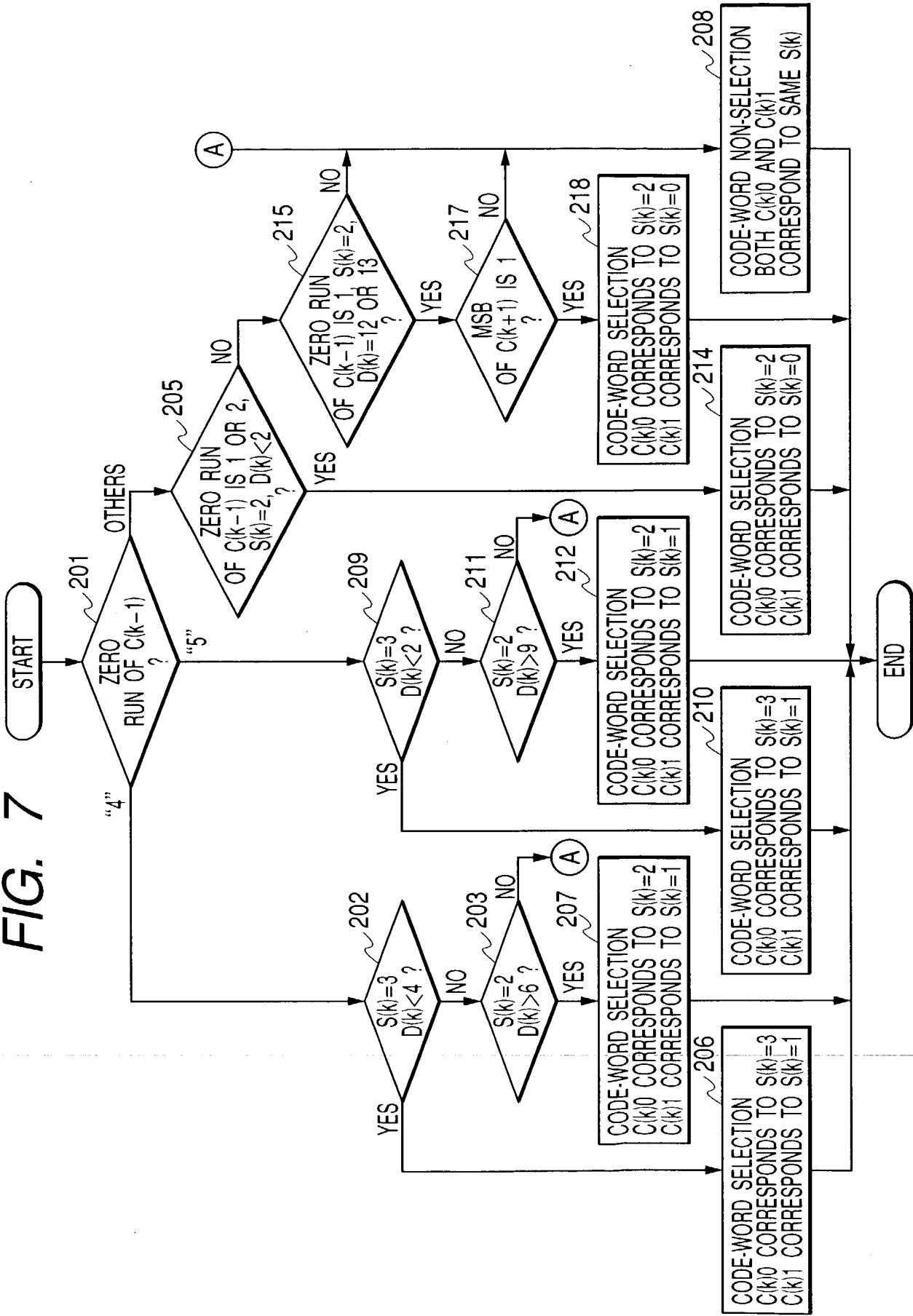


FIG. 10

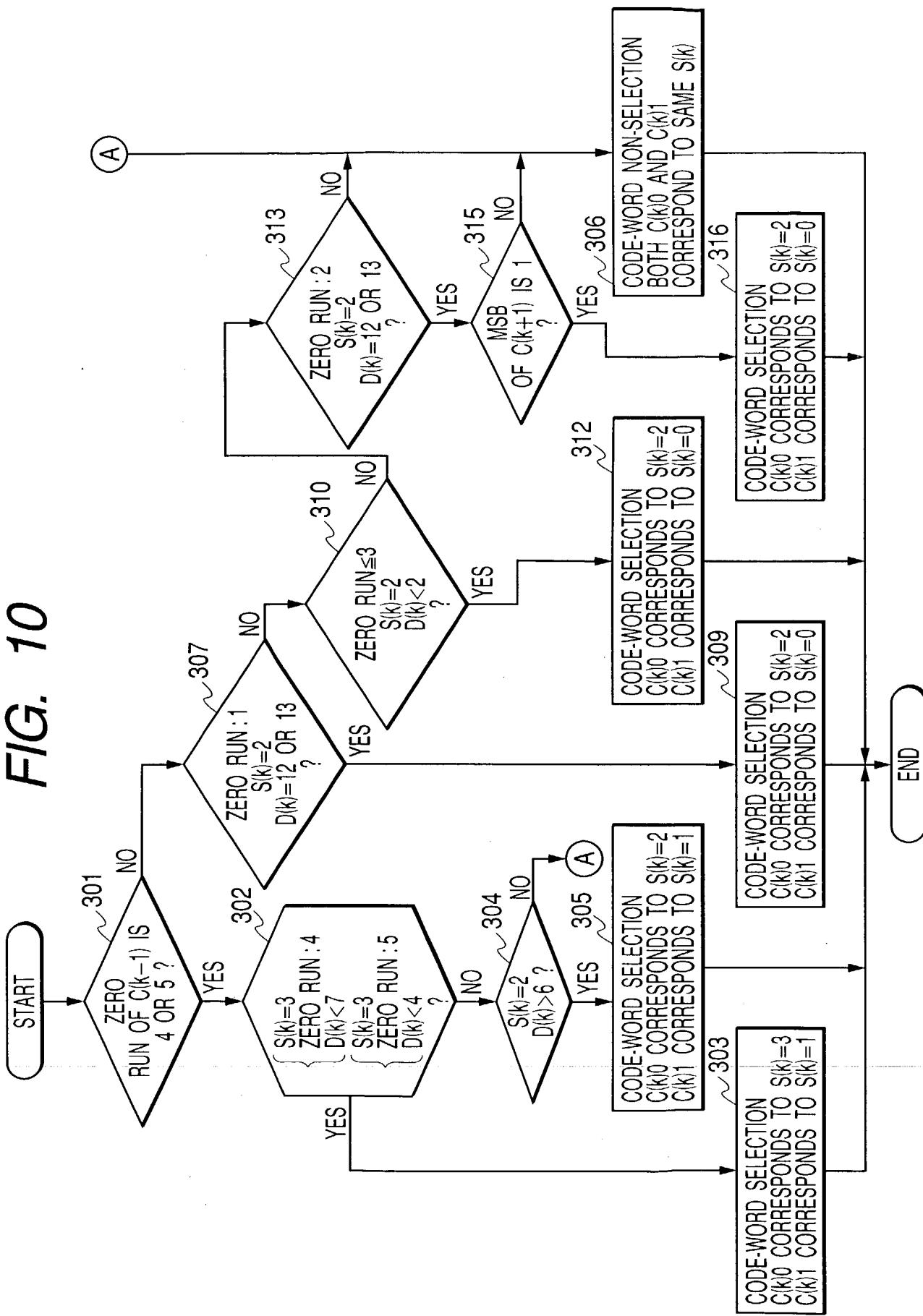


FIG. 11

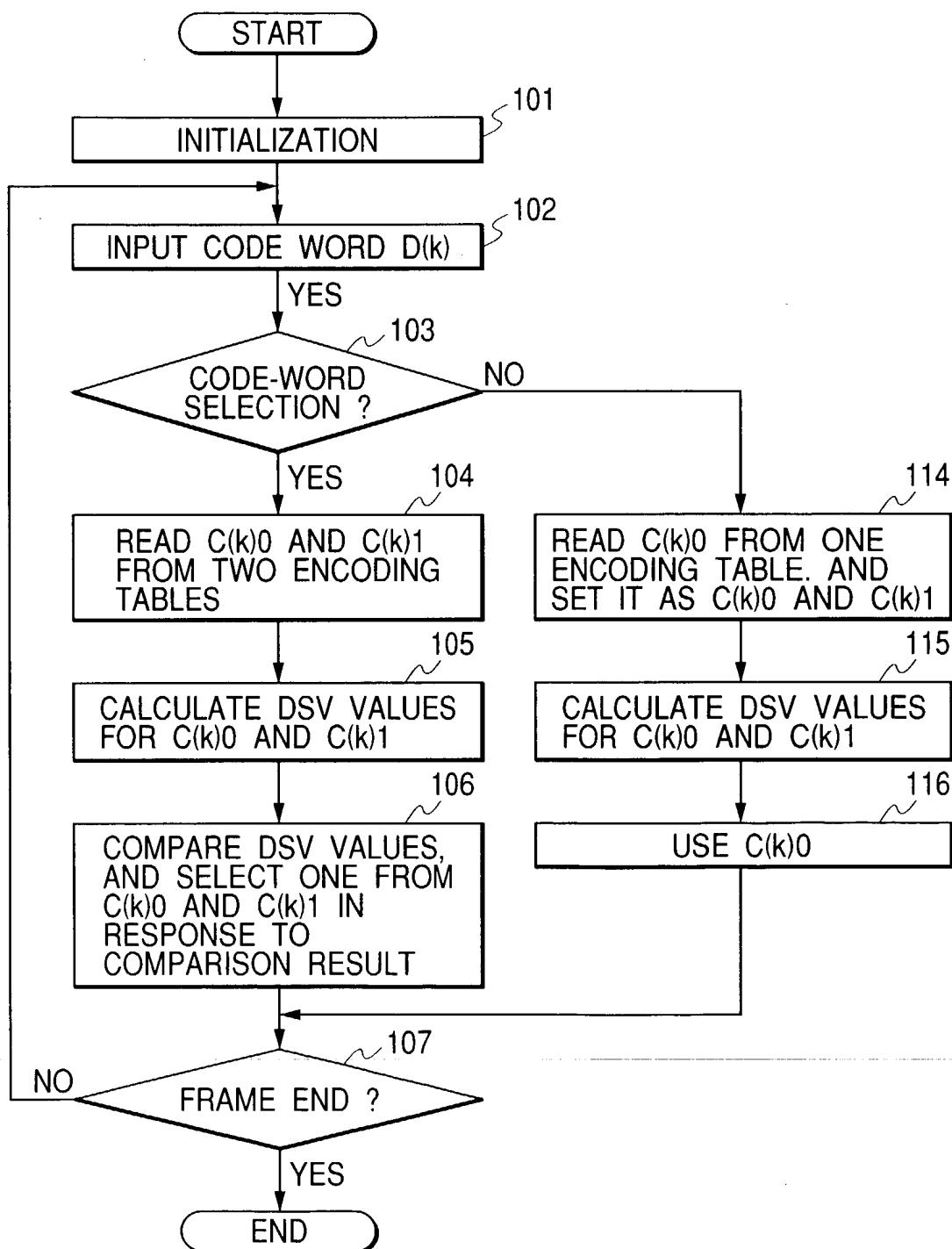
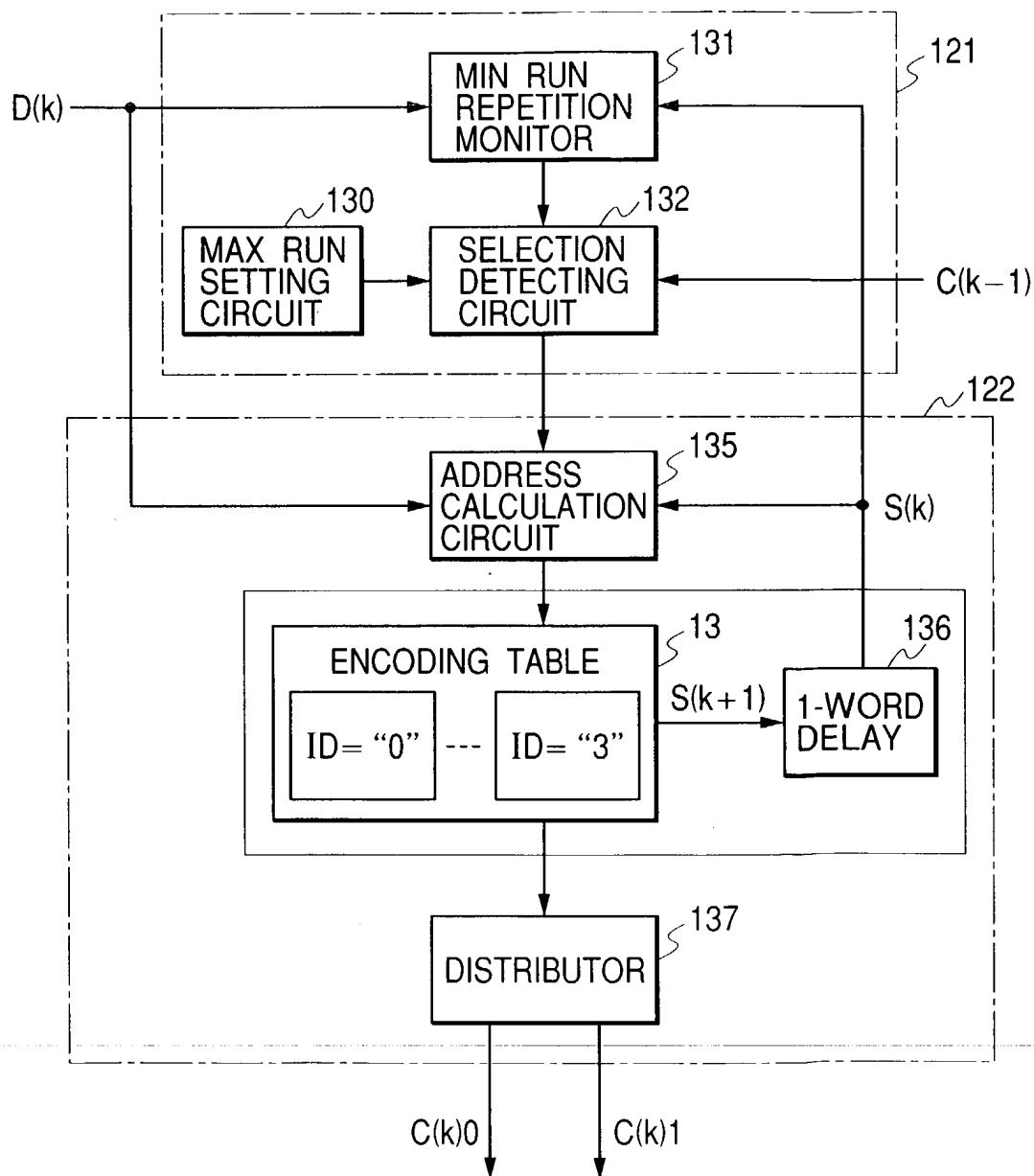


FIG. 12





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FIG. 13

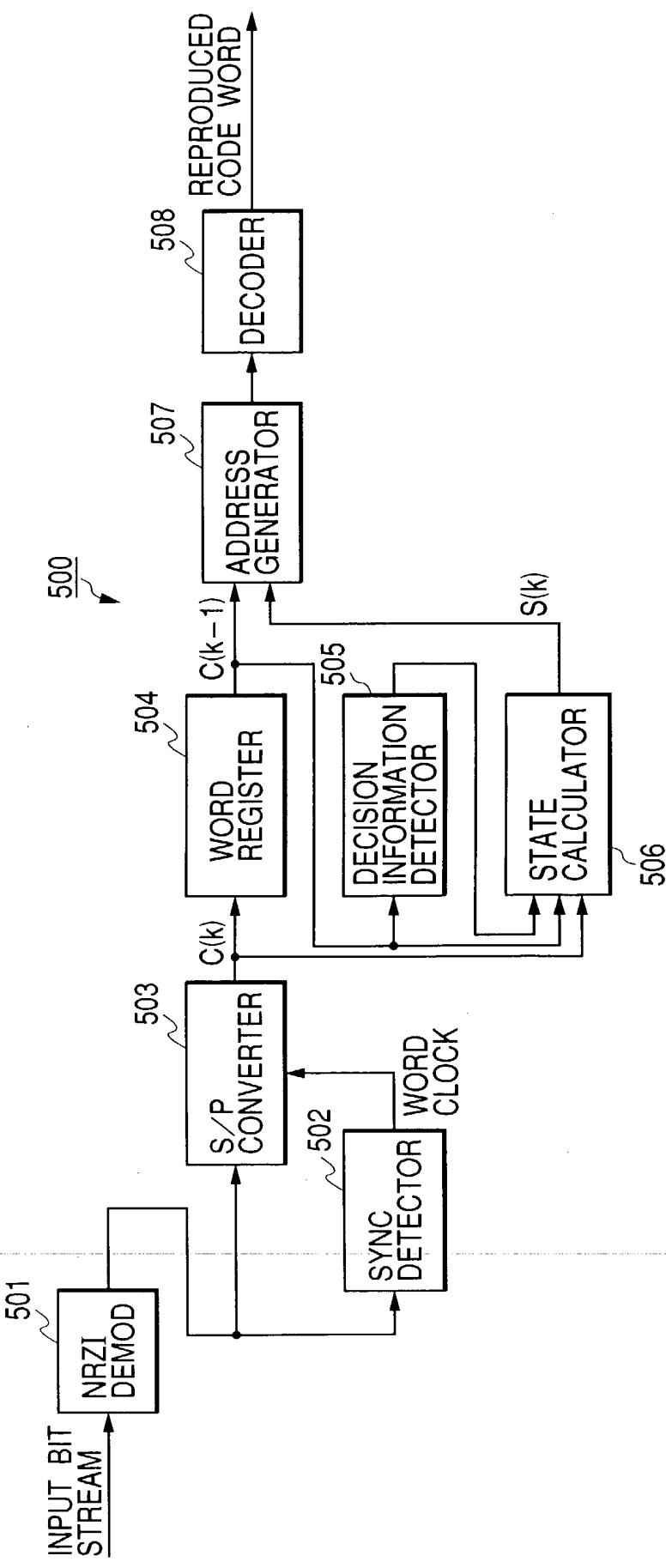




FIG. 14

C(k-1)		DECISION INFORMATION	D(k-1)			
DECIMAL	BINARY		S(k)=0	S(k)=1	S(k)=2	S(k)=3
0	000000	2	7	—	12	13
1	000001	0	0	1	—	—
2	000010	1	—	4	5	6
4	000100	1	—	7	8	9
5	000101	0	2	3	—	—
8	001000	1	—	11	14	15
9	001001	0	0	1	—	—
10	001010	1	—	10	12	13
16	010000	2	—	—	14	15
17	010001	0	2	3	—	—
18	010010	1	—	4	5	6
20	010100	1	—	9	10	11
21	010101	0	7	8	—	—
32	100000	2	—	—	12	13
33	100001	0	0	1	—	—
34	100010	1	—	4	5	6
37	100101	0	2	3	—	—
40	101000	1	—	11	14	15
41	101001	0	7	8	—	—
42	101010	1	—	10	12	13

FIG. 15

D(k)	C(k)	DECISION INFORMATION	S(k)
15	010000	2	3
0	001001	0	0
1	000001	0	1
2	000101	0	0
3	010001	0	—